

Title (en)

Photovoltaic shingles for roofing and method for connecting the shingles

Title (de)

Solardachschindeln zum Dachdecken und Verfahren zum Verbinden der Dachschindeln

Title (fr)

Bardeaux photovoltaïques pour toiture et procédé de connexion des bardeaux

Publication

EP 2139043 A3 20170412 (EN)

Application

EP 09163093 A 20090618

Priority

US 14790908 A 20080627

Abstract (en)

[origin: EP2139043A2] A shingle including a flexible sheet (14); a photovoltaic panel (16) attached to the flexible sheet; an electrical conductive (24a, 24b) path extending from a first side of the shingle to an opposite side of the shingle; a connector (26) on one end of the electrical conductive path, and a mating connector (28) on an opposite end of the electrical conductive path.

IPC 8 full level

H01L 31/02 (2006.01); **H01L 31/048** (2014.01)

CPC (source: EP US)

H01L 31/02008 (2013.01 - EP US); **H02S 20/25** (2014.12 - EP US); **H02S 40/36** (2014.12 - EP US); **Y02B 10/10** (2013.01 - EP US); **Y02E 10/50** (2013.01 - EP US)

Citation (search report)

- [I] JP 2004221151 A 20040805 - FUJI ELECTRIC HOLDINGS
- [I] JP H1140835 A 19990212 - SEKISUI CHEMICAL CO LTD
- [I] US 2004031219 A1 20040219 - BANISTER MARK P [US]
- [A] JP 2007019140 A 20070125 - ITOGUMI MOKUZAI KK, et al

Cited by

NL1037791C2; FR2979753A1; EP2533302A3; JP2014529988A; WO2013019637A1; WO2011011367A1; WO2011011369A1; WO2011011374A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2139043 A2 20091230; EP 2139043 A3 20170412; AU 2009202491 A1 20100114; AU 2009202491 B2 20150416; CN 101614057 A 20091230; CN 101614057 B 20160518; US 2009320389 A1 20091231; US 8507784 B2 20130813

DOCDB simple family (application)

EP 09163093 A 20090618; AU 2009202491 A 20090622; CN 200910158645 A 20090629; US 14790908 A 20080627